

From: Gambel, Phillip
Sent: Thursday, January 08, 2004 12:14 PM
To: STIC-ILL
Subject: anti-tnf or anti-ifn hiv / aids

stic

please provide the following references to

phillip gambela
r tunit 1644
308-3997

1644 mailbox 9e12

thanx

-----anti-tnf or anti-ifn hiv / aids -----

3/7/8 (Item 4 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
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08315013 95002983 PMID: 7522637

Cross-linking of CD4 molecules upregulates Fas antigen expression in lymphocytes by inducing interferon-gamma and tumor necrosis factor-alpha secretion.

Oyaizu N; McCloskey T W; Than S; Hu R; Kalyanaraman V S; Pahwa S
Department of Pediatrics, North Shore University Hospital-Cornell
University Medical College, Manhasset, NY.
Blood (UNITED STATES) Oct 15 1994, 84 (8) p2622-31, ISSN 0006-4971
Journal Code: 7603509
Contract/Grant No.: AI28281; AI; NIAID; DA05061; DA; NIDA; HD26606; HD;
NICHD

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

We have recently shown that, in unfractionated peripheral blood mononuclear cells (PBMCs), the cross-linking of CD4 molecules (CD4XL) is sufficient to induce T-cell apoptosis. However, the underlying mechanism for the CD4XL-mediated T-cell apoptosis is largely unknown. Several recent studies have shown that Fas antigen (Ag), a cell-surface molecule, mediates apoptosis-triggering signals. We show here that cross-linking of CD4 molecules, induced either by anti-CD4 monoclonal antibody (MoAb) Leu3a or by human immunodeficiency virus-1 (HIV-1) envelope protein gp160, upregulates Fas Ag expression as well as Fas mRNA in normal lymphocytes. Addition of the tyrosine protein kinase inhibitor genistein or of the immunosuppressive agent cyclosporin A abrogated these effects. The upregulation of Fas Ag closely correlated with apoptotic cell death, as determined by flow cytometry. In addition, CD4XL resulted in the induction of interferon-gamma (IFN-gamma) and tumor necrosis factor-alpha (TNF-alpha) in the absence of interleukin-2 (IL-2) and IL-4 secretion in PBMCs. Both INF-gamma and TNF-alpha were found to contribute to Fas Ag upregulation and both anti-IFN-gamma and anti-TNF-alpha antibodies blocked CD4XL-induced Fas Ag upregulation and lymphocyte apoptosis. These findings strongly suggest that aberrant cytokine secretion induced by CD4XL and consequent upregulation of Fas Ag expression might play a critical role in triggering peripheral T-cell apoptosis and thereby contribute to HIV disease pathogenesis.

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File 5:Biosis Previews(R) 1969-2003/Dec W2
(c) 2003 BIOSIS

File 73:EMBASE 1974-2003/Dec W1
(c) 2003 Elsevier Science B.V.

File 155:MEDLINE(R) 1966-2003/Nov W4
(c) format only 2003 The Dialog Corp.

*File 155: Medline has temporarily stopped updating (12-2003). And for notice of corrected dosage, please see HELP NEWS 154.

File 399:CA SEARCH(R) 1967-2003/UD=13926
(c) 2003 American Chemical Society

*File 399: Use is subject to the terms of your user/customer agreement. Alert feature enhanced for multiple files, etc. See HELP ALERT.

Set	Items	Description
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Set	Items	Description
S1	58	E2-E7
S2	37	RD S1 (unique items)
S3	10	S2 AND (HIV OR AIDS)
S4	10	RD S3 (unique items)
S5	208	(INTERFERON\$ OR TNF\$ OR TUMOUR(W) NECROSIS OR TUMOR(W) NECRO- SIS) (20N) (ANTIBOD?) AND (TREAT? OR INHIBIT? OR PREVENT? OR SU- PPRESS? OR THERAP?) (10N) (AIDS OR HIV?)
S6	151	RD S5 (unique items)
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Set	Items	Description
S1	58	E2-E7
S2	37	RD S1 (unique items)
S3	10	S2 AND (HIV OR AIDS)
S4	10	RD S3 (unique items)
S5	208	(INTERFERON\$ OR TNF\$ OR TUMOUR(W) NECROSIS OR TUMOR(W) NECRO- SIS) (20N) (ANTIBOD?) AND (TREAT? OR INHIBIT? OR PREVENT? OR SU- PPRESS? OR THERAP?) (10N) (AIDS OR HIV?)
S6	151	RD S5 (unique items)
S7	105	(CYTOKINE\$ OR INTERFERON\$ OR TNF\$ OR TUMOUR(W) NECROSIS OR - TUMOR(W) NECROSIS) (10N) (ANTIBOD?) AND (ANTIBOD?) (20N) (TREAT? OR THERAP? OR PREVENT? OR SUPPRESS? OR INHIBIT?) (10N) (AIDS OR H- IV?)
S8	75	RD S7 (unique items)
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? e au=skurkovich ?

Ref	Items	Index-term
E1	1	AU=SKURKOVA, D.
E2	1	AU=SKURKOVIC B
E3	0	*AU=SKURKOVICH ?
E4	33	AU=SKURKOVICH B
E5	4	AU=SKURKOVICH B S
E6	13	AU=SKURKOVICH B.
E7	7	AU=SKURKOVICH BORIS
E8	3	AU=SKURKOVICH G
E9	1	AU=SKURKOVICH G P
E10	28	AU=SKURKOVICH G V
E11	1	AU=SKURKOVICH G.V.
E12	28	AU=SKURKOVICH S

Enter P or PAGE for more

? s e2-e7

1	AU=SKURKOVIC B
0	AU=SKURKOVICH ?
33	AU=SKURKOVICH B
4	AU=SKURKOVICH B S
13	AU=SKURKOVICH B.
7	AU=SKURKOVICH BORIS

S1 58 E2-E7

? rd s1

...examined 50 records (50)

...completed examining records

S2 37 RD S1 (unique items)

? s s2 and (hiv or aids)

37 S2

368177 HIV

263715 AIDS

S3 10 S2 AND (HIV OR AIDS)

? rd s3

...completed examining records

S4 10 RD S3 (unique items)

? t s4/3/all

4/3/1 (Item 1 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

(c) 2003 BIOSIS. All rts. reserv.

0014081449 BIOSIS NO.: 200300050168

Anticytokine therapy: New approach to the treatment of autoimmune and cytokine-disturbance diseases.

AUTHOR: Skurkovich S V (Reprint); **Skurkovich B**; Kelly J A

AUTHOR ADDRESS: Advanced Biotherapy Labs, 802 Rollins Avenue, Rockville, MD, 20852, USA**USA

AUTHOR E-MAIL ADDRESS: sskurkovich@erols.com

JOURNAL: Medical Hypotheses 59 (6): p770-780 December 2002 2002

MEDIUM: print

ISSN: 0306-9877 (ISSN print)

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

4/3/2 (Item 2 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

(c) 2003 BIOSIS. All rts. reserv.

0013521493 BIOSIS NO.: 200200115004

Treatment of autoimmune diseases

AUTHOR: **Skurkovich Boris** (Reprint); Skurkovich Simon V

AUTHOR ADDRESS: Pawtucket, RI, USA**USA

JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1253 (4): Dec. 25, 2001 2001

MEDIUM: e-file

PATENT NUMBER: US 6333032 PATENT DATE GRANTED: December 25, 2001 20011225

PATENT CLASSIFICATION: 424-1301 PATENT ASSIGNEE: Advanced Biotherapy

Concepts, Inc., Carlsbad, CA, USA PATENT COUNTRY: USA

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

4/3/3 (Item 3 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

(c) 2003 BIOSIS. All rts. reserv.

0013471655 BIOSIS NO.: 200200065166

Treatment of autoimmune diseases, including AIDS, by removal of
interferons, TNFS and receptors therefor

AUTHOR: Skurkovich S V; **Skurkovich B**

AUTHOR ADDRESS: Rockville, Md., USA**USA

JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1198 (1): p331 May 6, 1997 1997

MEDIUM: print

PATENT NUMBER: US 5626843 PATENT DATE GRANTED: May 6, 1997 19970506

PATENT CLASSIFICATION: 424-140.1 PATENT ASSIGNEE: ADVANCED BIOTHERAPY

CONCEPTS, INC. PATENT COUNTRY: USA

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Citation

LANGUAGE: English

4/3/4 (Item 4 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

(c) 2003 BIOSIS. All rts. reserv.

0011916647 BIOSIS NO.: 199900176307

Treatment of autoimmune diseases, including AIDS

AUTHOR: **Skurkovich B**; Skurkovich S V

AUTHOR ADDRESS: Pawtucket, R.I., USA**USA

JOURNAL: Official Gazette of the United States Patent and Trademark Office
Patents 1220 (5): p4456 March 30, 1999 1999

MEDIUM: print

PATENT NUMBER: US 5888511 PATENT DATE GRANTED: March 30, 1999 19990330

PATENT CLASSIFICATION: 424-145.1 PATENT ASSIGNEE: ADVANCED BIOTHERAPY

CONCEPTS, INC. PATENT COUNTRY: USA

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Citation

LANGUAGE: English

4/3/5 (Item 5 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

(c) 2003 BIOSIS. All rts. reserv.

0009249951 BIOSIS NO.: 199497271236

A disturbance of interferon synthesis with the hyperproduction of unusual
kinds of interferon can trigger autoimmune disease and play a
pathogenetic role in AIDS: The removal of these interferons can be

therapeutic
AUTHOR: Skurkovich S (Reprint); **Skurkovich B**; Bellanti J A
AUTHOR ADDRESS: 802 Rollins Ave., Rockville, MD 20852, USA**USA
JOURNAL: Medical Hypotheses 42 (1): p27-35 1994 1994
ISSN: 0306-9877
DOCUMENT TYPE: Article; Literature Review
RECORD TYPE: Abstract
LANGUAGE: English

4/3/6 (Item 6 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2003 BIOSIS. All rts. reserv.

0008960693 BIOSIS NO.: 199396125109
A disturbance of interferon synthesis with the hyperproduction of unusual kinds of interferon can trigger autoimmune disease and play a pathogenetic role in **AIDS**: The removal of these interferons can by therapeutic
AUTHOR: Skurkovich S (Reprint); **Skurkovich B**; Bellanti J A
AUTHOR ADDRESS: Advanced Biotherapy Concepts Lab., Rockville, MD, USA**USA
JOURNAL: Medical Hypotheses 41 (2): p177-185 1993
ISSN: 0306-9877
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

4/3/7 (Item 7 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2003 BIOSIS. All rts. reserv.

0008457218 BIOSIS NO.: 199344020114
Aberrant IFN may help **HIV** survive and replicate: Its removal in **AIDS** patients may halt this process and help restore the immune system
AUTHOR: Skurkovich S V (Reprint); **Skurkovich B**
AUTHOR ADDRESS: Adv. Biotherapy Concepts Labs, Rockville, Md., USA**USA
JOURNAL: Journal of Interferon Research 12 (SUPPL. 1): pS118 1992
CONFERENCE/MEETING: Annual Meeting of the International Society for Interferon Research, Toronto, Ontario, Canada, September 28-October 2, 1992. J INTERFERON RES
ISSN: 0197-8357
DOCUMENT TYPE: Meeting
RECORD TYPE: Citation
LANGUAGE: English

4/3/8 (Item 8 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2003 BIOSIS. All rts. reserv.

0006425336 BIOSIS NO.: 198937003085
METHOD FOR TREATING **AIDS** AND OTHER IMMUNE DEFICIENCIES AND IMMUNE DISORDERS US PATENT-4824432. APRIL 25 1989
AUTHOR: SKURKOVICH S (Reprint); **SKURKOVICH B**
AUTHOR ADDRESS: ROCKVILLE, MD, USA**USA
JOURNAL: Official Gazette of the United States Patent and Trademark Office Patents 1101 (4): p2532 1989
PATENT NUMBER: US 4824432 PATENT DATE GRANTED: April 25, 1989 19890425
PATENT CLASSIFICATION: 604-4 PATENT ASSIGNEE: SVS LABORATORIES, INC
PATENT COUNTRY: USA
ISSN: 0098-1133
DOCUMENT TYPE: Patent

RECORD TYPE: Citation
LANGUAGE: ENGLISH

4/3/9 (Item 9 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2003 BIOSIS. All rts. reserv.

0005702458 BIOSIS NO.: 198784056607
A UNIFYING MODEL OF THE IMMUNOREGULATORY ROLE OF THE INTERFERON SYSTEM CAN
INTERFERON PRODUCE DISEASE IN HUMANS?
AUTHOR: SKURKOVICH S (Reprint); **SKURKOVICH B**; BELLANTI J A
AUTHOR ADDRESS: DEP OF INTERNATIONAL CENT FOR INTERDISCIPLINARY STUDIES OF
IMMUNOL, GEORGETOWN UNIV SCH OF MED, WASHINGTON, DC 20007, USA**USA
JOURNAL: Clinical Immunology and Immunopathology 43 (3): p362-373 1987
ISSN: 0090-1229
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

4/3/10 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE
(c) 2003 Elsevier Science B.V. All rts. reserv.

12013934 EMBASE No: 2003124847
Anti-interferon-gamma antibodies in the treatment of autoimmune diseases
Skurkovich B.; Skurkovich S.
S. Skurkovich, Advanced Biotherapy Inc., 802 Rollins Ave, Rockville, MD
20852 United States
AUTHOR EMAIL: sskurkovich@erols.com
Current Opinion in Molecular Therapeutics (CURR. OPIN. MOL. THER.) (
United Kingdom) 2003, 5/1 (52-57)
CODEN: CUOTF ISSN: 1464-8431
DOCUMENT TYPE: Journal ; Review
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 52
? t s4/7/all

0005702458 BIOSIS NO.: 198784056607

A UNIFYING MODEL OF THE IMMUNOREGULATORY ROLE OF THE INTERFERON SYSTEM CAN INTERFERON PRODUCE DISEASE IN HUMANS?

AUTHOR: SKURKOVICH S (Reprint); SKURKOVICH B; BELLANTI J A

AUTHOR ADDRESS: DEP OF INTERNATIONAL CENT FOR INTERDISCIPLINARY STUDIES OF IMMUNOL, GEORGETOWN UNIV SCH OF MED, WASHINGTON, DC 20007, USA**USA

JOURNAL: Clinical Immunology and Immunopathology 43 (3): p362-373 1987

ISSN: 0090-1229

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

ABSTRACT: This hypothesis is a presentation of a unifying model of the interferon (IFN) system as a cascade of sequentially interacting responses of IFNs-.alpha., -.beta., and -.gamma. involved in modulation of the immune response. We propose that every antigen is an IFNogen. The first stage(s) of immune responsiveness is associated primarily with the production of the family of IFN-.alpha.. In certain immunologically mediated diseases, including the autoimmune diseases and AIDS, disturbances in the synthesis of IFN-.alpha. occur with a switch to the production of predominantly acid-labile types, which have a negative immunoregulatory effect. Moreover, disturbances of IFN synthesis in the embryo or fetus can lead to deformities. Some viruses and other biological and chemical substances manifest a pathological effect by the IFN they induce. This IFN may help sustain the viruses and other substances which induce this IFN. We think it is unsafe to give patients immunoregulators in incomplete form. Thus, there is a potential danger in giving patients recombinants forms of IFNs and interleukin 2 produced in bacteria. In certain immune disorders, we may be able to treat patients by the binding or removal of hyperproduced IFNs from the body. This may lead to the restoration of immunologic balance and clinical improvement.

skurkovich

4/7/6 (Item 6 from file: 5)

DIALOG(R)File 5: Biosis Previews(R)

(c) 2003 BIOSIS. All rts. reserv.

0008960693 BIOSIS NO.: 199396125109

A disturbance of interferon synthesis with the hyperproduction of unusual kinds of interferon can trigger autoimmune disease and play a pathogenetic role in AIDS. The removal of these interferons can by therapeutic

AUTHOR: Skurkovich S (Reprint); Skurkovich B; Bellanti J A

AUTHOR ADDRESS: Advanced Biotherapy Concepts Lab., Rockville, MD, USA**USA

JOURNAL: Medical Hypotheses 41 (2): p177-185 1993

ISSN: 0306-9877

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: Disturbances of interferon synthesis with the hyperproduction of unusual kinds of interferons may be the initial step which triggers autoimmune disease through a concatenation of pathological reactions including the disturbance of several immunological and interferon cascades. This fundamental disturbance can result either from a genetic predisposition or from the influence of certain viruses (or viral particles) or both factors together. The administration of interferons to individuals with an underlying or latent autoimmune condition can exacerbate or trigger the disease. AIDS has many features similar to autoimmune disease, including the hyperproduction of aberrant interferon, a type with little or no anti-HIV activity, protectively induced by HIV to allow its continued replication and survival. In other words, while most viruses induce normal IFN which protects the cells against viral infection, HIV induces an abnormal, defective kind of IFN which insures viral survival. The neutralization of hyperproduced interferons by polyclonal or monoclonal antibody produced in mouse, or preferably, human hybridoma, removal via

Phillip Samuel
1644 12/82

QR1858.193L95

-----anti-tnf or anti-ifa hiv / aids -----

0007651711 BIOSIS NO.: 199191034602

INCREASED HUMAN IMMUNODEFICIENCY VIRUS HIV EXPRESSION IN CHRONICALLY
INFECTED U937 CELLS UPON IN-VITRO DIFFERENTIATION BY HYDROXYVITAMIN D3
ROLES OF INTERFERON AND TUMOR NECROSIS FACTOR IN REGULATION OF HIV
PRODUCTION

AUTHOR: LOCARDI C (Reprint); PETRINI C; BOCCOLI G; TESTA U; DIEFFENBACH C;
BUTTO S; BELARDELLI F

AUTHOR ADDRESS: LAB OF VIROL, IST SUPERIORE DI SANITA, VIALE REGINA ELENA,
299, 00161 ROME, ITALY**ITALY

JOURNAL: Journal of Virology 64 (12): p5874-5882 1990

ISSN: 0022-538X

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

ABSTRACT: We have investigated the roles of cytokines in the modulation of human immunodeficiency virus (HIV) production in chronically infected U937 cells upon in vitro differentiation by hydroxyvitamin D3. HIV-infected U937 cells exhibited markedly lower levels of CD4 and HLA-DR antigens than uninfected cells did. Vitamin D3 induced a time-dependent macrophagelike differentiation, as determined by monitoring the expression of some surface antigens by means of the monoclonal antibodies OKM1, OKM5, OKM13, OKM14, OKT4, anti-HLA-DR, TecMG2, TecMG3, LeuM3, LeuM1, anti-HLA-DP, and anti-HLA-DQ. Treatment with hydroxyvitamin D3 resulted in a marked increase in HIV production compared with control cultures. Interleukin 1.beta. (IL-1.beta.) and tumor necrosis factor .alpha. (TNF-.alpha.) were detected in the culture media, whereas interferon (IFN) was not generally found. Using the polymerase chain reaction technique, we found HIV -infected U937 cells to express detectable levels of mRNAs for alpha interferon (IFN-.alpha.), IFN-.beta., TNF-.alpha. and IL-1.beta.. The addition of TNF resulted in a marked increase of HIV production, whereas IL-1.beta. was ineffective. In contrast, both IFN-.alpha. and IFN-.beta. exerted some inhibitory effect on HIV production, which was more marked in vitamin D3-treated cultures than in untreated cultures. HIV production was significantly increased by antibodies to IFN-.alpha. in both untreated and vitamin 3-treated cultures. Anti-IFN-.beta. antibody increased HIV production only in vitamin D3-treated cells. In contrast, anti-TNF-.alpha. antibodies markedly decreased HIV production in both control and differentiating U937 cells. Vitamin D3 treatment resulted in a higher expression of TNF receptors in differentiating cells than in control HIV-infected cells. These data demonstrate a strong correlation between HIV production and macrophagelike differentiation in chronically infected U937 cells and suggest that endogenous IFN and TNF exert opposite effects in the regulation of virus production in both undifferentiated and vitamin D3-treated cell cultures.

Phillip / Hamed
1644 118

-----anti-tnf or anti-ifa hiv / aids -----

3/7/2 (Item 2 from file: 5)

DIALOG(R)File 5: Biosis Previews(R)

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0008406813 BIOSIS NO.: 199294108654

THE IMMUNOMODULATORY ROLE OF IFN-ALPHA OR MALTOSE-STABILIZED IFN-ALPHA ON
T-CELL ACTIVATION

AUTHOR: KOHNO K (Reprint); HOLAN V; MATSUDA S; KURIMOTO M; MINOWADA J

AUTHOR ADDRESS: FUJISAKI CELL CENT, HAYASHIBARA BIOCHEM LAB, INC, 675-1

FUJISAKI OKAYAMA 702, JPN**JAPAN

JOURNAL: Lymphokine and Cytokine Research 11 (4): p221-227 1992 231

ISSN: 1056-5477

QR355.565
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-----anti-tnf or anti-ifu hiv / aids-----

0007651711 BIOSIS NO.: 199191034602

INCREASED HUMAN IMMUNODEFICIENCY VIRUS HIV EXPRESSION IN CHRONICALLY
INFECTED U937 CELLS UPON IN-VITRO DIFFERENTIATION BY HYDROXYVITAMIN D3
ROLES OF INTERFERON AND TUMOR NECROSIS FACTOR IN REGULATION OF HIV
PRODUCTION

AUTHOR: LOCARDI C (Reprint); PETRINI C; BOCCOLI G; TESTA U; DIEFFENBACH C;
BUTTO S; BELARDELLI F

AUTHOR ADDRESS: LAB OF VIROL, IST SUPERIORE DI SANITA, VIALE REGINA ELENA,
299, 00161 ROME, ITALY**ITALY

JOURNAL: Journal of Virology 64 (12): p5874-5882 1990

ISSN: 0022-538X

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

ABSTRACT: We have investigated the roles of cytokines in the modulation of human immunodeficiency virus (HIV) production in chronically infected U937 cells upon in vitro differentiation by hydroxyvitamin D3. HIV-infected U937 cells exhibited markedly lower levels of CD4 and HLA-DR antigens than uninfected cells did. Vitamin D3 induced a time-dependent macrophagelike differentiation, as determined by monitoring the expression of some surface antigens by means of the monoclonal antibodies OKM1, OKM5, OKM13, OKM14, OKT4, anti-HLA-DR, TecMG2, TecMG3, LeuM3, LeuM1, anti-HLA-DP, and anti-HLA-DQ. Treatment with hydroxyvitamin D3 resulted in a marked increase in HIV production compared with control cultures. Interleukin 1.beta. (IL-1.beta.) and tumor necrosis factor .alpha. (TNF-.alpha.) were detected in the culture media, whereas interferon (IFN) was not generally found. Using the polymerase chain reaction technique, we found HIV -infected U937 cells to express detectable levels of mRNAs for alpha interferon (IFN-.alpha.), IFN-.beta., TNF-.alpha. and IL-1.beta.. The addition of TNF resulted in a marked increase of HIV production, whereas IL-1.beta. was ineffective. In contrast, both IFN-.alpha. and IFN-.beta. exerted some inhibitory effect on HIV production, which was more marked in vitamin D3-treated cultures than in untreated cultures. HIV production was significantly increased by antibodies to IFN-.alpha. in both untreated and vitamin 3-treated cultures. Anti-IFN-.beta. antibody increased HIV production only in vitamin D3-treated cells. In contrast, anti-TNF-.alpha. antibodies markedly decreased HIV production in both control and differentiating U937 cells. Vitamin D3 treatment resulted in a higher expression of TNF receptors in differentiating cells than in control HIV-infected cells. These data demonstrate a strong correlation between HIV production and macrophagelike differentiation in chronically infected U937 cells and suggest that endogenous IFN and TNF exert opposite effects in the regulation of virus production in both undifferentiated and vitamin D3-treated cell cultures.

Phillip / Rumbled
1644 118

-----anti-tnf or anti-ifu hiv / aids-----

3/7/2 (Item 2 from file: 5)

DIALOG(R)File 5: Biosis Previews(R)

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0008406813 BIOSIS NO.: 199294108654

THE IMMUNOMODULATORY ROLE OF IFN-ALPHA OR MALTOSE-STABILIZED IFN-ALPHA ON
T-CELL ACTIVATION

AUTHOR: KOHNO K (Reprint); HOLAN V; MATSUDA S; KURIMOTO M; MINOWADA J

AUTHOR ADDRESS: FUJISAKI CELL CENT, HAYASHIBARA BIOCHEM LAB, INC, 675-1

FUJISAKI OKAYAMA 702, JPN**JAPAN

JOURNAL: Lymphokine and Cytokine Research 11 (4): p221-227 1992

ISSN: 1056-5477

Ad: Walker, Robert E.

AUTHOR ADDRESS: LIR/NIAID, Build 10, Room 11C103, Bethesda, MD 20892, USA**

USA

JOURNAL: Journal of Infectious Diseases 174 (1): p63-68 1996 1996

ISSN: 0022-1899

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: Tumor necrosis factor-alpha (TNF-alpha), a proinflammatory cytokine known to stimulate human immunodeficiency virus type 1 (HIV-1) replication, has been implicated in the pathogenesis of HIV-1 infection. Inhibition of TNF-alpha by a chimeric humanized monoclonal antibody, cA2, was investigated in 6 HIV-1-infected patients with CD4 cell counts $\geq 200/\text{mm}^3$. Two consecutive infusions of 10 mg/kg 14 days apart were well tolerated, and a prolonged serum half-life for cA2 (mean, 257 \pm 70 h) was demonstrated. Serum immunoreactive TNF-alpha concentrations fell from a mean prestudy value of 6.4 pg/mL (range, 4.2-7.9) to 1.1 pg/mL (range, 0.5-2.2) 24 h after the first infusion and returned to baseline within 7-14 days. A similar response was seen after the second infusion. No consistent changes in CD4 cell counts or plasma HIV RNA levels were observed over 42 days. Future studies evaluating the therapeutic utility of long-term TNF-alpha suppression using anti-TNF-alpha antibodies are feasible and warranted.

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6/7/10 (Item 10 from file: 5)

DIALOG(R)File 5: Biosis Previews(R)

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0012878937 BIOSIS NO.: 200100050776

Activation of signal transduction and apoptosis in healthy lymphomonocytes exposed to bystander HIV-1-infected cells

AUTHOR: Abbate I; Dianzani F; Capobianchi M R (Reprint)

AUTHOR ADDRESS: Laboratory of Virology, National Institute for Infectious Diseases 'L. Spallanzani' I. R. C. C. S., Via Portuense, 292-00149, Rome, Italy**Italy

JOURNAL: Clinical and Experimental Immunology 122 (3): p374-380 December, 2000 2000

MEDIUM: print

ISSN: 0009-9104

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

Phillip Dornblat
1644 12/22

ABSTRACT: Persistent activation of the immune system is one of the hallmarks of HIV-1 infection. In this study we analysed the induction of factors involved in cytokine signal transduction, such as STAT 1 proteins and IRF-1 mRNA, in normal peripheral blood mononuclear cells (PBMC) exposed to HIV-infected cells, and the induction of apoptosis. Western blot analyses and reverse transcriptase-polymerase chain reaction results indicate that both cells infected with a X4 strain and cells infected with a R5 strain are able to increase intracellular levels of STAT 1 alpha and beta proteins as well as IRF-1 mRNA. This effect was prevented by neutralizing antibodies against interferon-alpha (IFN-alpha). HIV-1-infected cells dose-dependently induced apoptotic commitment in normal PBMC, as revealed by DNA fragmentation analysis, but this was not accompanied by an increase of caspase-3 activity, even if a slight up-regulation of IL-1beta-converting enzyme mRNA was detected. Apoptosis induction could be abrogated mainly by antibodies against tumour necrosis factor-alpha (TNF-alpha) and, to a lesser extent, by antibodies against IFN-gamma. All these findings suggest that uninfected PBMC can undergo activation of signal transduction and apoptosis after exposure to bystander HIV-infected cells, subsequent to the induction of cytokines such as IFNs and TNF-alpha.

0012995027 BIOSIS NO.: 200100166866

Autoantibodies to TNFalpha in HIV-1 infection: Prospects for anti-cytokine vaccine therapy

105
AUTHOR: MATSUYAMA T (Reprint); HAMAMOTO Y; YOSHIDA T; KIDO Y; KOBAYASHI S;
KOBAYASHI N; YAMAMOTO N
AUTHOR ADDRESS: DEP VIROL PARASITOLOGY, YAMAGUCHI UNIV SCH MED, 1144
KOGUSHI, UBE, YAMAGUCHI 755**JAPAN
JOURNAL: Japanese Journal of Cancer Research 79 (2): p156-159 1988
ISSN: 0910-5050
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

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ABSTRACT: The effect of culture supernatant of MT-2 cells on human immunodeficiency virus (HIV)-producing cells. MOLT-4/HIVHTLV-III_B cells, was examined. As compared to the effect on MOLT-4 cells, parent cells not infected with HIV, a selective cytotoxic/cytostatic effect on MOLT-4/HIVHTLV-III_B cells was observed 4 days after treatment with up to 640-fold-diluted MT-2 supernatant. Furthermore, under similar conditions, a 2- to 6-fold increase in the number of HIV particles was detected in the culture of MOLT-4/HIVHTLV-III_B cells 6 hr after treatment. Complete blocking of these effects by anti-lymphotoxin monoclonal antibody, but not by anti-tumor necrosis factor antibody, indicates that these effects of MT-2 supernatant on MOLT-4/HIVHTLV-III_B cells are attributable to a lymphotoxin-related cytotoxic factor.

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0012878937 BIOSIS NO.: 200100050776
Activation of signal transduction and apoptosis in healthy lymphomonocytes exposed to bystander HIV-1-infected cells
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JOURNAL: Clinical and Experimental Immunology 122 (3): p374-380 December, 2000 2000
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LANGUAGE: English

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ABSTRACT: Persistent activation of the immune system is one of the hallmarks of HIV-1 infection. In this study we analysed the induction of factors involved in cytokine signal transduction, such as STAT 1 proteins and IRF-1 mRNA, in normal peripheral blood mononuclear cells (PBMC) exposed to HIV-infected cells, and the induction of apoptosis. Western blot analyses and reverse transcriptase-polymerase chain reaction results indicate that both cells infected with a X4 strain and cells infected with a R5 strain are able to increase intracellular levels of STAT 1alpha and beta proteins as well as IRF-1 mRNA. This effect was prevented by neutralizing antibodies against interferon-alpha (IFN-alpha). HIV-1-infected cells dose-dependently induced apoptotic commitment in normal PBMC, as revealed by DNA fragmentation analysis, but this was not accompanied by an increase of caspase-3 activity, even if a slight up-regulation of IL-1beta-converting enzyme mRNA was detected. Apoptosis induction could be abrogated mainly by antibodies against tumour necrosis factor-alpha (TNF-alpha) and, to a lesser extent, by antibodies against IFN-gamma. All these findings suggest that uninfected PBMC can undergo activation of signal transduction and apoptosis after exposure to bystander HIV-infected cells, subsequent to the induction of cytokines such as IFNs and TNF-alpha.

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Philip Samuel
1644 12/22

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JOURNAL: Biomedicine and Pharmacotherapy 55 (1): p23-31 February, 2001
2001
MEDIUM: print
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DOCUMENT TYPE: Article
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ABSTRACT: Tumor necrosis factor alpha (TNFalpha) is a proinflammatory cytokine principally involved in the activation of lymphocytes in response to viral infection. TNFalpha also stimulates the production of other cytokines, activates NK cells and potentiates cell death and/or lysis in certain models of viral infection. Although TNFalpha might be expected to be a protective component of an antiviral immune response, several lines of evidence suggest that TNFalpha and other virally-induced cytokines actually may contribute to the pathogenesis of HIV infection. Based on the activation of HIV replication in response to TNFalpha, HIV appears to have evolved to take advantage of host cytokine activation pathways. Antibodies to TNFalpha are present in the serum of normal individuals as well as in certain autoimmune disorders, and may modulate disease progression in the setting of HIV infection. We examined TNFalpha-specific antibodies in HIV-infected non-progressors and healthy seronegatives; anti-TNFalpha antibody levels are significantly higher in GRIV seropositive slow/non-progressors (N = 120, mean = 0.24), compared to seronegative controls (N = 12, mean = 0.11). TNFalpha antibodies correlated positively with viral load, (P = 0.013, r = 0.282), and CD8+ cell count (P = 0.03, r = 0.258), and inversely with CD4+ cell count (P = 0.003, r = -0.246), percent CD4+ cells (P = 0.008, r = -0.306), and CD4:CD8 ratio (P = 0.033, r = -0.251). TNFalpha antibodies also correlated positively with antibodies to peptides corresponding to the CD4 binding site of gp160 (P = 0.001, r = 0.384), the CD4 identity region (P = 0.016, r = 0.29), the V3 loop (P = 0.005, r = 0.34), and the amino terminus of Tat (P = 0.001, r = 0.395); TNFalpha antibodies also correlated positively with antibodies to Nef protein (P = 0.008, r = 0.302). The production of anti-TNFalpha antibodies appears to be an adaptive response to HIV infection and suggests the potential utility of modified cytokine vaccines in the treatment of HIV infections as well as AIDS-related and unrelated autoimmune and CNS disorders.

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0014049558 BIOSIS NO.: 200300008277

Elevated levels of tumor necrosis factor alpha (TNF-alpha) in human immunodeficiency virus type 1-transgenic mice: Prevention of death by antibody to TNF-alpha.

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JOURNAL: Journal of Virology 76 (22): p11710-11714 November 2002 2002
MEDIUM: print
ISSN: 0022-538X (ISSN print)
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Homozygous human immunodeficiency virus type 1 (HIV-1)-transgenic mice (Tg26) appear normal at birth but die within 3 to 4 weeks. The skin of these animals shows diffuse scaling and high-level expression of both HIV-1 mRNA and gp120. Previous experiments showed that treatment with human chorionic gonadatropin (hCG) prevented death and the expression of HIV-1 mRNA and gp120. The present

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JOURNAL: Journal of Infectious Diseases 174 (1): p63-68 1996 1996

ISSN: 0022-1899

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

MPL

ABSTRACT: Tumor necrosis factor-alpha (TNF-alpha), a proinflammatory cytokine known to stimulate human immunodeficiency virus type I (HIV-1) replication, has been implicated in the pathogenesis of HIV-1 infection. Inhibition of TNF-alpha by a chimeric humanized monoclonal antibody, cA2, was investigated in 6 HIV-1-infected patients with CD4 cell counts $\geq 200/\text{mm}^3$. Two consecutive infusions of 10 mg/kg 14 days apart were well tolerated, and a prolonged serum half-life for cA2 (mean, 257 \pm 70 h) was demonstrated. Serum immunoreactive TNF-alpha concentrations fell from a mean prestudy value of 6.4 pg/mL (range, 4.2-7.9) to 1.1 pg/mL (range, 0.5-2.2) 24 h after the first infusion and returned to baseline within 7-14 days. A similar response was seen after the second infusion. No consistent changes in CD4 cell counts or plasma HIV RNA levels were observed over 42 days. Future studies evaluating the therapeutic utility of long-term TNF-alpha suppression using anti-TNF-alpha antibodies are feasible and warranted.

6/7/10 (Item 10 from file: 5)
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0012878937 BIOSIS NO.: 200100050776

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AUTHOR: Abbate I; Dianzani F; Capobianchi M R (Reprint)

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JOURNAL: Clinical and Experimental Immunology 122 (3): p374-380 December, 2000 2000

MEDIUM: print

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DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

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0012995027 BIOSIS NO.: 200100166866

Autoantibodies to TNFalpha in HIV-1 infection: Prospects for anti-cytokine vaccine therapy

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JOURNAL: Japanese Journal of Cancer Research 79 (2): p156-159 1988
ISSN: 0910-5050
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

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ABSTRACT: The effect of culture supernatant of MT-2 cells on human immunodeficiency virus (HIV)-producing cells. MOLT-4/HIVHTLV-IIIB cells, was examined. As compared to the effect on MOLT-4 cells, parent cells not infected with HIV, a selective cytotoxic/cytostatic effect on MOLT-4/HIVHTLV-IIIB cells was observed 4 days after treatment with up to 640-fold-diluted MT-2 supernatant. Furthermore, under similar conditions, a 2- to 6-fold increase in the number of HIV particles was detected in the culture of MOLT-4/HIVHTLV-IIIB cells 6 hr after treatment. Complete blocking of these effects by anti-lymphotoxin monoclonal antibody, but not by anti-tumor necrosis factor antibody, indicates that these effects of MT-2 supernatant on MOLT-4/HIVHTLV-IIIB cells are attributable to a lymphotoxin-related cytotoxic factor.

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